

What is claimed is:

1. An antisense compound 8 to 80 nucleobases in length targeted to a nucleic acid molecule encoding kinesin-like 1, wherein said compound is at least 70% complementary to said nucleic acid molecule encoding kinesin-like 1, and wherein said compound inhibits the expression of kinesin-like 1 mRNA by at least 10%.
2. The antisense compound of claim 1 comprising 12 to 50 nucleobases in length.
3. The antisense compound of claim 2 comprising 15 to 30 nucleobases in length.
4. The antisense compound of claim 1 comprising an oligonucleotide.
5. The antisense compound of claim 4 comprising a DNA oligonucleotide.
6. The antisense compound of claim 4 comprising an RNA oligonucleotide.
7. The antisense compound of claim 4 comprising a chimeric oligonucleotide.
8. The antisense compound of claim 4 wherein at least a portion of said compound hybridizes with RNA to form an oligonucleotide-RNA duplex.
9. The antisense compound of claim 1 having at least 80% complementarity with said nucleic acid molecule encoding kinesin-like 1.
10. The antisense compound of claim 1 having at least 90% complementarity with said nucleic acid molecule encoding kinesin-like 1.
11. The antisense compound of claim 1 having at least 95% complementarity with said nucleic acid molecule encoding kinesin-like 1.
12. The antisense compound of claim 1 having at least 99% complementarity with said nucleic acid molecule encoding kinesin-like 1.
13. The antisense compound of claim 1 having at least one modified internucleoside linkage, sugar moiety, or nucleobase.
14. The antisense compound of claim 1 having at least one 2'-O-methoxyethyl sugar moiety.
15. The antisense compound of claim 1 having at least one phosphorothioate internucleoside linkage.

16. The antisense compound of claim 1 wherein at least one cytosine is a 5-methylcytosine.
17. A method of inhibiting the expression of kinesin-like 1 in a cell or tissue comprising contacting said cell or tissue with the antisense compound of claim 1 so that expression of kinesin-like 1 is inhibited.
18. The method of claim 17 wherein the cell or tissue is a cancer cell or cancerous tissue.
19. The method of claim 18 wherein the cancer cell or cancer tissue is derived from cancer of the breast, lung, colon, prostate, pancreas, ovary, cervix, brain, liver or kidney.
20. A method of screening for a modulator of kinesin-like 1, the method comprising the steps of:
 - contacting a preferred target segment of a nucleic acid molecule encoding kinesin-like 1 with one or more candidate modulators of kinesin-like 1, and
 - identifying one or more modulators of kinesin-like 1 expression which modulate the expression of kinesin-like 1.
21. The method of claim 20 wherein the modulator of kinesin-like 1 expression comprises an oligonucleotide, an antisense oligonucleotide, a DNA oligonucleotide, an RNA oligonucleotide, an RNA oligonucleotide having at least a portion of said RNA oligonucleotide capable of hybridizing with RNA to form an oligonucleotide-RNA duplex, or a chimeric oligonucleotide.
22. A diagnostic method for identifying a disease state comprising identifying the presence of kinesin-like 1 in a sample using at least one of the primers comprising SEQ ID NOs 6 or 7, or the probe comprising SEQ ID NO: 8.
23. A kit or assay device comprising the antisense compound of claim 1.
24. A method of treating an animal having a disease or condition associated with kinesin-like 1 comprising administering to said animal a therapeutically or prophylactically effective amount of the antisense compound of claim 1 so that expression of kinesin-like 1 is inhibited.
25. The method of claim 24 wherein the disease or condition is a hyperproliferative disorder.

26. The method of claim 25 wherein the hyperproliferative disorder is cancer or a tumor.
27. The method of claim 26 wherein the cancer or tumor is cancer or a tumor of the breast, lung, colon, prostate, pancreas, ovary, cervix, brain, liver or kidney.
28. The method of claim 24 wherein the disease or condition is an autoimmune disease.
29. The antisense compound of claim 1, wherein said antisense compound comprises at least an 8-nucleobase portion of SEQ ID NO: 12, 13, 14, 15, 16, 17, 18, 21, 23, 24, 25, 26, 27, 29, 30, 32, 34, 35, 36, 38, 39, 41, 43, 45, 46, 47, 82, 83, 85, 86, 88, 89, 91, 92, 93, 95, 96, 97, 98, 100, 101, 102, 108, 110, 113, 116, 122, 126, 128, 130, 131, 133, 135, 143, 144 or 148.
30. The antisense compound of claim 29, wherein said antisense compound has a sequence selected from the group consisting of SEQ ID NOs 12, 13, 14, 15, 16, 17, 18, 21, 23, 24, 25, 26, 27, 29, 30, 32, 34, 35, 36, 38, 39, 41, 43, 45, 46, 47, 82, 83, 85, 86, 88, 89, 91, 92, 93, 95, 96, 97, 98, 100, 101, 102, 108, 110, 113, 116, 122, 126, 128, 130, 131, 133, 135, 143, 144 and 148.
31. An antisense compound having SEQ ID NO: 26.
32. An antisense compound having SEQ ID NO: 16.
33. An antisense compound having SEQ ID NO: 86.
34. An antisense compound having SEQ ID NO: 96.
35. An antisense compound having SEQ ID NO: 122.
36. The antisense compound of claim 1, wherein said antisense compound comprises at least an 8-nucleobase portion of SEQ ID NO, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 232, 233 or 234.
37. The antisense compound of claim 36, wherein said antisense compound has a sequence selected from the group consisting of SEQ ID NOs: 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198,

199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 232, 233 and 234.

38. The antisense compound of claim 1, wherein said antisense compound comprises an antisense nucleic acid molecule that is specifically hybridizable with a 5'-untranslated region (5'UTR) of a nucleic acid molecule encoding kinesin-like 1.

39. The antisense compound of claim 1, wherein said antisense compound comprises an antisense nucleic acid molecule that is specifically hybridizable with a start region of a nucleic acid molecule encoding kinesin-like 1.

40. The antisense compound of claim 1, wherein said antisense compound comprises an antisense nucleic acid molecule that is specifically hybridizable with a coding region of a nucleic acid molecule encoding kinesin-like 1.

41. The antisense compound of claim 1, wherein said antisense compound comprises an antisense nucleic acid molecule that is specifically hybridizable with a 3'-untranslated region of a nucleic acid molecule encoding kinesin-like 1.

42. The antisense compound of claim 1, wherein said antisense compound comprises an antisense nucleic acid molecule that is specifically hybridizable with an intron of a nucleic acid molecule encoding kinesin-like 1.

43. The antisense compound of claim 1, wherein said antisense compound comprises an antisense nucleic acid molecule that is specifically hybridizable with an intron-exon junction of a nucleic acid molecule encoding kinesin-like 1.

44. A method of arresting the cell cycle comprising administering the compound of claim 1.

45. The method of claim 44 wherein said cell cycle is arrested at the G2M phase.

46. A method of reducing expression of kinesin-like 1 in a cell or tissue which overexpresses kinesin-like 1 comprising contacting said cell or tissue with the antisense compound of claim 1 so that expression of kinesin-like 1 is reduced.

47. The method of claim 46 wherein the cell or tissue is a cancer cell or cancerous tissue.

48. The method of claim 47 wherein the cancer cell or cancer tissue is derived from cancer of the breast, lung, colon, prostate, pancreas, ovary, cervix, brain, liver or kidney.